In re Patent Application of: MCCARTHY ET AL.

Serial No. 10/779,402

Filed: FEBRUARY 13, 2004

## REMARKS

The Examiner is thanked for the careful examination of the present application. In view of the arguments presented in detail below, it is submitted that all claims are patentable.

## I. The Claims

Independent Claim 1 is directed to a communications system that includes a plurality of servers connected together in a network for processing a plurality of different job types having respective different resource usage characteristics associated therewith. Each server determines its own respective health metric based upon at least one job being processed thereby and weighs the health metric based upon the respective resource usage characteristic of the at least one job. The resource usage characteristic represents resources being consumed by the at least one job.

The servers map the weighted health metrics for different resource usage characteristics to a common scale. The communications system includes a dispatcher for collecting the commonly scaled weighted health metrics from the servers by polling the servers for the weighted health metrics and distributing jobs to the servers based thereon.

Independent Claim 9 is directed to a load distributor for a plurality of servers. Independent Claim 14 is directed to a job distribution method for a plurality of servers. Independent Claim 17 is directed to a corresponding computer readable medium.

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## II. The Claims Are Patentable

The Examiner maintained his rejection of independent Claims 1, 9, 14, and 17 over the combination of Albert et al. and Richter et al. Albert et al. is directed to a system and method for selecting a server to handle a connection. The method includes receiving at a service manager a connection request intercepted by a network device having a forwarding agent that is operative to receive instructions from a service manager, the connection request having been forwarded from the forwarding agent on the network device to the service manager.

A preferred server is selected at the service manager from among a group of available servers. The preferred server is the server that is to service the connection request. Instructions are sent from the service manager to the forwarding agent. The instructions include the preferred server that is to service the connection request so that the connection request may be forwarded from the network device to the preferred server. The servers send feedback messages to the service manager. The service manager uses these feedback messages to perform load balancing.

The Examiner correctly recognized that Albert et al. fails to disclose that its servers map the weighted health metrics for different resource usage characteristics to a common scale. In an attempt to provide this critical deficiency, the Examiner combined Albert et al. with Richter et al. Richter et al. is cited as disclosing the use of different resource usage characteristics.

In re Patent Application of: MCCARTHY ET AL.

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The Examiner correlated the weights of Albert et al. to the health metric of independent Claim 1, and the virtual machines of Albert et al. to the at least one job of independent Claim 1. Moreover, the Examiner correlated the normalization of the weight of Albert et al. to weighting the health metrics of independent Claim 1.

Applicant previously argued that Albert et al. (and therefore the combination of Albert et al. and Richter et al.) fails to disclose weighting the health metric based upon the respective resource usage characteristic of the at least one job and that the resource usage characteristic represents resources being consumed by the at least one job, as recited in independent Claim 1. More particularly, Applicant argued that while Albert et al. discloses the derivation and normalization of weights of virtual machines, based upon the allocated processing capacity of those virtual machines, those weights are based upon the amount of processing capacity of a physical server that is allocated to virtual machines, and do not represent resources being consumed.

In the most recent Official Action, the Examiner correctly recognized that Albert et al. fails to disclose a resource usage characteristic representing resources being consumed by at least one job. In an attempt to provide this critical deficiency of Albert et al., the Examiner once again looked to Richter et al. In particular, the Examiner cited paragraphs 368 and 370 of Richter et al. as disclosing this feature.

 $\label{eq:Applicants} \mbox{ Applicants respectfully submit that the Examiner has} \\ \mbox{misread Richter et al. and has taken the cited paragraphs out of} \\$ 

In re Patent Application of: MCCARTHY ET AL. Serial No. 10/779,402 Filed: FEBRUARY 13, 2004

context. Richter does not disclose a resource usage characteristic representing resources being consumed by at least one job. Paragraphs 368 and 370 refer to an overload protection policy. In particular, paragraph 370 explains that:

[R]esource usage accounting may be based on a resource utilization value that is reflective of the system resource consumption required to perform a particular type of information management and/or to accomplish a particular information manipulation task.

Rather than being a resource usage characteristic representing resources <u>being</u> consumed by at least one job, the utilization values of Richter et al. are an estimate of the resource consumption that will be required to perform a particular task. The resource utilization values of Richter et al. are determined before the task is ever executed. As explained in paragraph 364:

Optional differentiated service policy 2020 may be applied to incoming requests that successfully pass overload protection policy 2010, prior to sending each incoming request to dispatching policy 2030 where admitted new requests are forwarded to appropriate subsystems for processing.

That is, the system of Richter at al. executes the overload protection policy, which determines the resource utilization values for a given task, before ever executing that task. Therefore, these resource utilization values do not represent resources <a href="mailto:being-consumed">being-consumed</a> by the task, as the task has yet be executed when the resource utilization values are

In re Patent Application of: MCCARTHY ET AL.
Serial No. 10/779,402

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determined. Consequently, Richter et al. (and therefore the combination of Albert et al. and Richter et al.) fails to disclose weighting the health metric based upon the respective resource usage characteristic of the at least one job, the resource usage characteristic representing resources being consumed by the at least one job, as recited in independent Claim 1.

As such, independent Claim 1 is patentable over the combination of Albert et al. and Richter et al. Independent Claims 9, 14, and 17 contain similar recitations and are patentable for the same reasons. The dependent claims, which recite yet further distinguishing details, are likewise patentable and require no further discussion herein

In re Patent Application of: MCCARTHY ET AL.

Serial No. 10/779,402

Filed: FEBRUARY 13, 2004

## CONCLUSION

In view of the arguments provided herein, it is submitted that all the claims are patentable. Accordingly, a Notice of Allowance is requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,

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